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=> synergism
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=> s synergism
L1 1298 SYNERGISM

=> s sweetener#
L2 17975 SWEETENER#

=> s l1 and l2
L3 116 L1 AND L2

=> s polydextrose
L4 1140 POLYDEXTROSE

=> s l3 and l4
L5 0 L3 AND L4

=> s l1 and l4
L6 0 L1 AND L4

=> s synergism or synergistic
L7 4523 SYNERGISM OR SYNERGISTIC

=> s l7 and l2
L8 282 L7 AND L2

=> s (synergism or synergistic)ti
MISSING OPERATOR NERGISTIC)TI
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (synergism or synergistic)/ti
L9 774 (SYNERGISM OR SYNERGISTIC)/TI

=> s l9 and l2
L10 39 L9 AND L2

=> d 1-39 all

L10 ANSWER 1 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 651616 FROSTI
TI A synergistic sugar-free syrup composition and a process for
preparing the same.
IN Ramakrishna C.; Reddy Y.R.S.

PA Council of Scientific and Industrial Research (New Delhi; India)
 SO PCT Patent Application
 PI WO 2004084642 A1
 AI 20030325
 DT Patent
 LA English
 SL English
 AB A synergistic sugar-free syrup composition for producing traditional Indian sweets such as Jamun, Rasogolla, Laddu, and sweet Boondi is described. The invention consists of a combination of sorbitol, mannitol, water, and an intense sweetener. The intense sweetener is chosen from sucralose, aspartame, acesulfam K, and their mixtures, imparting characteristics similar to those of sugar. The invention allows the preparation of a sweetener blend with a sweetness equivalent to sugar and similar consistency and mixing properties to produce products similar in quality. The invention is suitable for health-conscious individuals who desire confectionery with low or no sugar.
 CT ASIAN FOODS; CONFECTIONERY; DIETETIC CONFECTIONERY; DIETETIC FOODS; ETHNIC FOODS; HEALTHY CONFECTIONERY; HEALTHY FOODS; INDIAN CONFECTIONERY; INDIAN FOODS; LOW CALORIE FOODS; ORIENTAL FOODS; PATENT; PCT PATENT; SUGAR CONFECTIONERY; SUGAR FREE CONFECTIONERY; SUGAR FREE FOODS; SUGAR FREE SWEETS; SWEETS
 DED 29 Oct 2004

 L10 ANSWER 2 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 591164 FROSTI
 TI Synergistic combination of sweeteners including D-tagatose.
 IN Andersen H.; Vigh M.L.
 PA Arla Foods Amba
 SO United States Patent
 PI US 6432464 B 20020813
 WO 9934689 19990715
 AI 19990105
 NTE 20020813
 DT Patent
 LA English
 SL English
 AB D-tagatose is a powerful synergist for intense sweeteners, and is used as a sweetening agent and a bulking agent. D-tagatose is capable of replacing significant quantities of low-calorie sweeteners, even when added at concentrations well below its measured sweet-taste threshold. In addition, D-tagatose provides a subtle benefit with respect to flavour, aftertaste and mouthfeel of beverages.
 CT BEVERAGES; D TAGATOSE; FLAVOUR ENHANCERS; HEALTHY BEVERAGES; LITE BEVERAGES; LOW CALORIE BEVERAGES; PATENT; SWEETENERS; TAGATOSE; US PATENT
 DED 17 Sep 2002

 L10 ANSWER 3 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 535138 FROSTI
 TI N-(N-(3,3-dimethylbutyl)-L-alpha-aspartyl)-L-phenylalanine 1-methyl ester synergistic sweetener blends.
 IN Pajor L.L.; Gibes K.M.
 PA Nutrasweet Co.
 SO PCT Patent Application
 PI WO 2000043416 A1
 AI 20000124
 PRAI United States 19990125
 DT Patent
 LA English
 SL English
 AB A sweetener blend comprises N-(N-(3,3-dimethylbutyl)-L-alpha-

aspartyl)-L-phenylalanine 1-methyl ester (neotame) and another sweetener. These blends exhibit isobole synergy.

SH ADDITIVES
CT NEOTAME; PATENT; PCT PATENT; SWEETENER MIXTURES; SWEETENERS; SYNERGY
DED 17 Oct 2000

L10 ANSWER 4 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 524533 FROSTI
TI N-(-(3,3-dimethylbutyl)-L-alpha-aspartyl)-L-phenylalanine 1-methyl ester synergistic sweetener blends.
IN Pajor L.L.; Gibes K.M.
PA NutraSweet Co.
SO United States Patent
PI US 6048999 B 20000411
AI 19990125
NTE 20000411
DT Patent
LA English
SL English
AB Certain sweeteners have been shown to exhibit additive synergy when combined with each other, but isobole synergy has not previously been recognized. Sweetener blends of N-(-(3,3-dimethylbutyl)-L-alpha-aspartyl)-L-phenylalanine 1-methyl ester and another sweetener are described. Such blends exhibit isobole synergy when the sweetness produced by the combination exceeds that which would be expected if the sweeteners did not interact.

SH ADDITIVES
CT FLAVOUR; PATENT; SENSORY PROPERTIES; SWEETENERS; SWEETNESS; SYNERGISM; US PATENT
DED 16 Jun 2000

L10 ANSWER 5 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 521437 FROSTI
TI Synergism among ternary mixtures of fourteen sweeteners

AU Schiffman S.S.; Sattely-Miller E.A.; Graham B.G.; Booth B.J.; Gibes K.M.
SO Chemical Senses, 2000, (April), 25 (2), 131-140 (13 ref.)
ISSN: 0379-864X
DT Journal
LA English
SL English
AB Synergism is well known in mixtures of intense sweeteners. This study investigated the extent of synergism among ternary mixtures of sweetening agents of various types and chemical structures. All sweeteners in the mixtures had the same sweetness intensity as 2% sucrose. The highest mean rating for sweetness intensity was observed with alitame, neohesperidin DC, and rebaudioside A. No clear predictive trends were found. The authors note that a greater extent of synergism may be attainable with binary rather than ternary mixtures.

SH ADDITIVES
CT FLAVOUR; INTENSE SWEETENERS; SENSORY PANELS; SENSORY PROPERTIES; SWEETENERS; SWEETNESS; SYNERGISM; TERNARY MIXTURES
DED 30 May 2000

L10 ANSWER 6 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 498744 FROSTI
TI Sweetener synergism in food.
AU Kilcast D.
SO Food Ingredients and Analysis International, 1999, (May-June), 21 (3), 27-33. (0 ref.)
ISSN: 0968-574X
DT Journal
LA English

SL English

AB The mechanisms involved in the perception of sweetness are outlined, together with the flavour characteristics of sucrose. Mixtures of sweeteners that have a synergistic effect, or that mimic the flavour of sucrose are discussed. In particular, research conducted at Leatherhead Food RA that showed that sucrose and maltitol work synergistically with cyclamate and acesulfam K, is discussed. Sweeteners and sweetener blends that are commercially available are reviewed; these include Sucralose, Fruitafit, Fructsweet, Sunett, Scansweet Smart, lactitol, xylitol, isomalt, Herbasweet, Herbarom, Talin, Ybbstaler, Energysmart and stevia sugar.

SH ADDITIVES

CT ACESULFAM K; ADDITIVES; BASIC GUIDE; CYCLAMATES; FLAVOUR; LFRA; MALTITOL; ORGANIZATIONS; POLYOLS; SUCROSE; SUGARS; SWEETENERS; SWEETNESS; SYNERGISM

DED 22 Jul 1999

L10 ANSWER 7 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN

AN 475389 FROSTI

TI Descriptive profiles of synergistic mixtures of bulk and intense sweeteners.

AU Portmann M.-O.; Kilcast D.

SO Food Quality and Preference, 1998, (July), 9 (4), 221-229 (18 ref.)
ISSN: 0950-3293

DT Journal

LA English

SL English

AB Mixtures of bulk and intense sweeteners are used to give desirable combinations of textural properties and sweetness. These blends may need to be optimally formulated for soft drinks of specific flavours. Descriptive profiles were studied for blends of maltitol with cyclamate, maltitol with acesulfam K, and sucrose with cyclamate, with reference to a 10% solution of sucrose. Quantitative descriptive analysis (QDA) was used to establish the profiles. Analysis of variance and principal component analysis were used to investigate the overall relationships among single solutions and blends of sweeteners. A significant reduction in non-sweet tastes and aftertastes associated with acesulfam K and with cyclamate could be achieved by blending these intense sweeteners with sucrose or maltitol. Maltitol was more efficient than sucrose in reduction of non-sweet tastes.

SH ADDITIVES

CT ACESULFAM K; CYCLAMATES; FLAVOUR; MALTITOL; POLYOLS; SENSORY PROFILES; SENSORY PROPERTIES; SUCROSE; SUGARS; SWEETENER BLENDS; SWEETENERS; SWEETNESS

DED 15 Sep 1998

L10 ANSWER 8 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN

AN 469172 FROSTI

TI Sweeteners - synergistic solutions.

AU O'Carroll P.

SO World of Ingredients, 1998, (March-April), 20-23 (0 ref.)

DT Journal

LA English

AB Many new sweetener products consist of blends because blended sweeteners are more similar to sucrose than single sweeteners. Sweetness is also enhanced synergistically when sweeteners are blended. New developments in sweeteners include the Twinsweet brand (a combination of aspartame and acesulfam-K), Smart (a sweetener with a similar mouthfeel to sugar), the ScanSweet Select concept, where sweeteners are chosen to match the application, NutraSweet's Mainstream Product Improvement (MPI) concept, where some sugar is replaced by aspartame in a product, and the Sunett-Multi-Sweetener-Concept system, which is fibre-enriched and sugar-free. Some sweeteners (e.g. neohesperidine DC) are

used as flavour enhancers. Tables present information on the characteristics and properties of sweeteners, some of the NutraSweet Product Range, EU maximum use levels of sweeteners and synergy of sweetening agent blends.

SH ADDITIVES

CT ADDITIVES; DEVELOPMENT; INTENSE SWEETENERS; NEW PRODUCTS;
SWEETENERS

DED 18 Jun 1998

L10 ANSWER 9 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN

AN 464206 FROSTI

TI Synergistic sweeteners. (The Sunett multi-sweetener concept from Nutrinova Nutritional Specialties and Food Ingredients GmbH of Germany.)

AU Wiedmann M.; Jager M.

SO Food Ingredients and Analysis International, 1997, (November-December), 19 (6), 51-56 (0 ref.)

DT Journal

LA English

AB This system, which does not contain sugar, can be used as a sweetener in low-calorie foods. It is produced by blending high-intensity sweeteners, e.g. acesulfam K and aspartame, with oligosaccharides, which are a source of soluble fibre. The Company claims that it is has a good flavour and enhances the nutritional value of the end product.

CT ADDITIVES; NUTRINOVA NUTRITION SPECIALTIES AND FOOD INGREDIENTS GMBH GERMANY; SOLUBLE FIBRE; SUNETT MULTI-SWEETENER CONCEPT;
SWEETENERS

DED 26 Mar 1998

L10 ANSWER 10 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN

AN 461937 FROSTI

TI Synergistic sweeteners.

AU Wiedmann M.; Jager M.

SO Food Ingredients and Analysis International, 1997, (November-December), 19 (6), 51-52+55-56 (0 ref.)

DT Journal

LA English

AB Nutrinova has introduced a sweetening system that combines high-intensity sweeteners (such as aspartame and acesulfam K) with pre-biotic soluble fibres (such as oligofructose and inulin). Sensory evaluations of the new sweetening system are compared with those of standard high-intensity sweeteners. In addition to providing potential health benefits, the new sweetening system was found to provide a more rounded flavour than the artificial sweeteners alone.

SH ADDITIVES

CT ACESULFAM K; ARTIFICIAL SWEETENERS; ASPARTAME; INULIN;
NUTRINOVA; OLIGOFRUCTOSE; OLIGOSACCHARIDES; SENSORY EVALUATIONS;
SYNERGISM

DED 19 Feb 1998

L10 ANSWER 11 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN

AN 326913 FROSTI

TI Encapsulated synergistic sweetening agent compositions comprising aspartame and acesulfame-K and methods for preparing same.

IN Cherukuri S.R.; Faust S.M.

PA Warner-Lambert Co.

SO European Patent Application

PI EP 555237 A1

WO 9207473 19920514

DS AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE

AI 19910923

PRAI United States 19901031

DT Patent

LA English
SL English
AB Encapsulated synergistic sweetening agent compositions, which contain aspartame and acesulfam-K, and their methods of preparation are described, as are chewing gum compositions in which they may be used. Chewing gum consists of a gum base, a bulking agent, a flavouring agent and the encapsulated sweetening agent, which consists of a synergistic combination of the two sweetening agents, an emulsifier and polyvinyl alcohol.

CT ACESULFAM K; ASPARTAME; CHEWING GUM; ENCAPSULATED; PATENTS; PRODUCTION; SWEETENERS; SYNERGISM
DED 21 Oct 1993

L10 ANSWER 12 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 281167 FROSTI
TI Synergism. Sweeteners for soft drinks.
AU Thomas D.E.
SO Getrankeindustrie, 1992, 46 (1), 14-6
DT Journal
LA German
SL German
AB In Germany the use of acesulfam-K, aspartame, cyclamate and saccharin is now permitted in non-dietetic beverages. This has boosted the 'light' product sector and caused the value of the total soft-drinks market to exceed that of the coffee market. The article discusses the properties and relative sweetness intensities of the new sweeteners and the synergistic effects achieved by combinations of substances, particularly acesulfam and aspartame.

SH SWEETENERS
CT ACESULFAM K; ASPARTAME; BEVERAGES; CYCLAMATES; FLAVOUR; GERMANY; INTENSITY; LEGISLATION; PROPERTIES; SACCHARIN; SOFT DRINKS; SWEET; SWEETENERS; SWEETNESS; SYNERGISM
DED 12 Mar 1992

L10 ANSWER 13 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 277732 FROSTI
TI Relative sweetness and synergism of fructose or xylitol with aspartame or acesulfam-K.
AU Askar A.; El-Zoghbi M.
SO Flussiges Obst, 1991, 58 (6), 298-300 and supplement 'Fruit Processing', 101-3 (19 ref.)
DT Journal
LA German; English
SL German; French; English
AB In the light of the growing demand for low-calorie, non-cariogenic soft drinks with an acceptable flavour, a study was made of the relative sweetness of fructose, xylitol, aspartame and acesulfam-K solutions compared with a reference sucrose solution. The relative sweetness and synergistic effect of different combinations of the four sweeteners were also evaluated. It was found that the relative sweetness increased as the sweetener concentration decreased. A synergistic effect of up to 3.8% was noted when fructose or xylitol was combined with aspartame or acesulfam-K.

SH SWEETENERS
CT ACESULFAM K; ASPARTAME; BEVERAGES; EVALUATION; FLAVOUR; FRUCTOSE; INTENSITY; SWEET; SWEETENERS; SYNERGISM; XYLITOL
DED 29 Jan 1992

L10 ANSWER 14 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 277250 FROSTI
TI Synergistic sweetening compositions containing xylitol and acesulfame-k and methods for preparing same.
IN Cherukuri S.R.; Raman K.P.; Faust S.M.
PA Warner-Lambert Co.

SO European Patent Application
 PI EP 459952 A2
 DS BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; NL; SE
 AI 19910527
 PRAI United States 19900601
 DT Patent
 LA English
 AB There is reported still to be a need for enhanced or synergistic sweetening compositions, which could be added to ingestible compositions in reduced total amounts and would then reduce costs, stability problems and taste problems that are associated with many sweetening agents. This invention relates to synergistic sweetening compositions comprising xylitol and the potassium salt of 6-methyl-1,2,3-oxathiazin-4(31+)-one 2,2-dioxide. These compositions can be used in chewing gum, beverages and hard and soft confections. The methods for preparing the sweetening compositions and the ingestible products in which they may be used are described.
 CT 920124; APPLICATIONS; PATENTS; PRODUCTION; SWEETENERS; SYNERGISM
 DED 24 Jan 1992

L10 ANSWER 15 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 268216 FROSTI
 TI Synergistic sweetening compositions containing polydextrose and a chlorodeoxysugar and methods for preparing same.
 IN Wong L.L.; Faust S.M.; Cherukuri S.R.
 PA Warner-Lambert Co.
 SO European Patent Application
 PI EP 447359 A1
 DS BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; NL; SE
 AI 19910306
 PRAI United States 19900312
 DT Patent
 LA English
 AB A synergistic sweetening composition comprising polydextrose and a chlorodeoxysugar derivative are described. These compositions may be used in a variety of products such as chewing gum, confectionery, beverages, etc.
 CT 911011; PATENTS; SUGAR SUBSTITUTES; SWEETENERS
 DED 11 Oct 1991

L10 ANSWER 16 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 262473 FROSTI
 TI Synergistic sweetening compositions containing dipeptide sweetening agents and methods for preparing same.
 IN Faust S.M.; Wong L.L.; Cherukuri S.R.
 PA Warner-Lambert Co.
 SO European Patent Application
 PI EP 398466 A2
 PRAI United States 19890519
 DT Patent
 LA English
 AB The invention relates to sweetness synergy achieved by combining certain specific intense dipeptide sweetening agents. The compositions described may be used in chewing gum and hard and soft confectionery processes for preparing the sweetening composition and the food products they may be used in are also described.
 CT CHEWING GUM; CONFECTIONERY; DIPEPTIDE SWEETENERS; PATENTS; PRODUCTION; SWEETENERS
 DED 28 Nov 1990

L10 ANSWER 17 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 254266 FROSTI
 TI Synergistic sweetening compositions containing a dipeptide

sweetening agent and hydrogenated starch hydrolysates and methods for preparing same.

IN Wong L.L.; Faust S.M.; Cherukuri S.R.
PA Warner-Lambert Co.
SO European Patent Application
PI EP 420539 A2
DS BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; NL; SE
AI 19900924
PRAI United States 19890928
DT Patent
LA English
AB The synergistic sweetening agent consists of L-alpha-aspartyl-D-alanine N-(2,2,4,4,-tetramethyl-3-thietanyl)amide and a hydrogenated starch hydrolysate. It can be used in a variety of ingestible products such as chewing gums, hard and soft confectionery, beverages, etc.

CT PATENTS; SWEETENERS
DED 10 May 1991

L10 ANSWER 18 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 254207 FROSTI
TI Sweeteners and bulking agents - overlapping technologies and synergistic markets.
AU Greenwald C.G.
SO Food Ingredients Europe: Conference proceedings 1990., Published by: Expoconsult Publishers, Maarssen, 1990, 20-4 (7 ref.)
ISBN: 90-73220-04-1
NTE Proceedings of the FIE Conference, Dusseldorf, Germany, 1990.
DT Conference Article
LA English
AB An increased public awareness of the effect of diet on health, and the concern about consumption of high levels of sugar have led to the demand for low-calorie foods and the development of sweet, low-calorie bulking agents to replace the functional properties of sugar. This paper discusses the requirements of various low-calorie foods, and the characteristics of some sweetening agents developed to fulfil these requirements.

CT APPLICATIONS; BULKING AGENTS; CONSUMPTION; FLAVOUR; LOW CALORIE FOODS; PROPERTIES; SWEETENERS; TYPE
DED 9 May 1991

L10 ANSWER 19 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 248527 FROSTI
TI High-intensity sweetener blends provide synergistic enhancement.
AU Duxbury D.D.
SO Food Processing, 1990, 51 (4), 36-40
DT Journal
LA English
AB The characteristics and various applications of the sweetener acesulfame-k are outlined. Product applications include soft drinks, dairy products, confectionery and baked goods. The synergistic effect of acesulfame-k when combined with other high-intensity sweeteners, particularly aspartame, is discussed.

CT ACESULFAM K; APPLICATIONS; ASPARTAME; SWEETENERS; SYNERGISM
DED 3 Jul 1990

L10 ANSWER 20 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 234156 FROSTI
TI Stability and synergism - important characteristics for the application of Sunett (Acesulfame K).
AU von Rymon Lipinski G.-W.
SO Food ingredients Europe: Conference proceedings 1989, Paris. Maarssen: Expoconsult Publishers, 249-251 (4 ref. En)., 1989
DT Conference Article

AB A representative of Hoechst discusses the characteristics of Sunett, the tradename for acesulfam-K, with particular emphasis on its stability and synergistic taste enhancement observed with other sweet-tasting compounds such as aspartame and cyclamate.
CT ACESULFAM K; ASPARTAME; CYCLAMATES; NEW PRODUCTS; PROPERTIES; SOLUBILITY; STABILITY; SUNETT; SWEETENERS; SYNERGISM
DED 17 Jul 1990

L10 ANSWER 21 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 228063 FROSTI
TI Synergistic sweetening compositions containing chlorodeoxysugars and maltitol and methods for preparing same.
IN Wong L.L.; Faust S.M.; Cherukuri S.R.
PA Warner-Lambert Co.
SO European Patent Application
PI EP 366251
DT Patent
LA English
AB The use of intense sweeteners and bulking agents together may led to a delayed and enhanced sweetness effect. The combination of chlorodeoxysugar derivatives, such as sucralose (trichloro-trideoxygalactosucrose) and bulking agents containing about 50% maltitol is considered, along with their use in confectionery and chewing gum.
CT 900629; BULKING AGENTS; CHEWING GUM; CHLORODEOXYSUGAR; CONFECTIONERY; MALTITOL; PATENTS; SUCRALOSE; SWEETENERS
DED 8 May 1990

L10 ANSWER 22 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 225162 FROSTI
TI Synergistic sweetening compositions containing chlorodeoxysugar and compositions containing same.
IN Faust S.M.; Wong L.L.; Cherukuri S.R.
PA Warner-Lambert Company
SO European Patent Application
PI EP 354680
DT Patent
LA English
AB A synergistic sweetening composition containing a chlorodeoxysucrose derivative and a non-bitter dipeptide intense sweetener, such as aspartame, is discussed.
CT 900326; ASPARTAME; CHLORODEOXYSUCROSE; CHLORODEOXYSUGAR; COMPOUNDS; PATENTS; SWEETENERS
DED 26 Mar 1990

L10 ANSWER 23 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
AN 199455 FROSTI
TI Sweeteners. Types, technology, sensory and nutritional characteristics, and synergistic effects.
AU Kruger C.
SO Zucker und Susswaren Wirtschaft (ZSW), 1988, 41 (11), 360-5 (28 ref.)
NTE Paper presented at the International Conference for Chocolate Technology '87, Solingen, West Germany, 1987.
DT Journal
LA German
SL German
AB The article looks at the use of sugar alcohols in place of sugars in confectionery products, such as chocolate. The flavour intensity of the sugar alcohols, their solubility, compatibility and calorie content are discussed, The effect of the use of sugar alcohols on teeth is also considered.
CT CALORIES; CARIES; CHOCOLATE; COMPATIBILITY; FLAVOUR; INTENSITY; PLAQUE; SOLUBILITY; SUBSTITUTE; SUBSTITUTES; SUGAR; SUGAR ALCOHOLS; SUGAR SUBSTITUTES; SWEETENERS; SYNERGYSM; TYPE
DED 5 Jun 1989

L10 ANSWER 24 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 114179 FROSTI
 TI Interrelationships among synergism, potentiation, enhancement
 and expanded perceived intensity vs concentration.
 AU Van Der Heijden A.; Brussel L.B.P.; Heidema J.; Kosmeijer J.G.; Peer H.G.
 SO Journal of Food Science, 1983, 48 (4), 1192-96+1207 (50 ref.)
 DT Journal
 LA English
 SL English
 AB "...The synergistic effects of sodium glutamate inosine monophosphate,
 cyclamate-saccharin and fructose-saccharin can be considered as a single
 or double enhancement depending on whether one or both components
 influence the taste intensity of its counterpart. The flavour concepts
 could be studied simultaneously in taste intensity interaction
 experiments with sucrose, glucose, fructose, and xylitol using a special
 experimental design. Expanded perceived intensity vs concentration can be
 regarded as self-potentiation." Authors' summary.
 CT CONCENTRATION; CYCLAMATES; FLAVOUR; FLAVOUR ENHANCERS; FRUCTOSE; GLUCOSE;
 IMP; INTENSITY; MECHANISMS; MSG; PERCEPTIONS; SACCHARIN; SUCROSE;
 SWEETENERS; XYLITOL
 DED 31 Oct 1983

L10 ANSWER 25 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 92512 FROSTI
 TI Synergism and the sweet response.
 AU Birch G.G.; Ogunmoyela G.; Munton S.L.
 SO Nutritive sweeteners, Ed. Birch G.G., Parker K.J. Applied Science,
 275-85., 1982, 25 ref.
 DT Book
 LA English
 SL English
 CT BITTERNESS; COMPOSITION; COMPOUNDS; FLAVOUR; FLAVOUR COMPOUNDS;
 IMPROVEMENT; INCREASE; INTENSITY; INTERACTIONS; MECHANISMS; PERCEPTIONS;
 SUGAR; SURFACTANTS; SWEETENERS; SWEETNESS; SYNERGISM; TIME;
 WATER
 DED 2 Apr 1982

L10 ANSWER 26 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 87069 FROSTI
 TI Synergism between sweeteners.
 AU HYVONEN L.
 SO Carbohydrate sweeteners in foods and nutrition: Proceedings of a
 conference, Helsinki, 1978. ed. Koivistoinen P., Hyvonen L., Academic
 Press, 173-184 (16 ref. En)., 1980
 UDC, 547
 NTE 45:
 DT Miscellaneous
 CT CYCLAMATES; DISACCHARIDES; FLAVOUR; FRUCTOSE; GLUCOSE; INTERACTIONS;
 MIXTURES; SACCHARIN; SUGAR; SWEETENERS; SWEETNESS; SYNERGISM;
 XYLITOL
 DED 1 Oct 1980

L10 ANSWER 27 OF 39 FROSTI COPYRIGHT 2007 LFRA on STN
 AN 39408 FROSTI
 TI Fructose-saccharin and xylitol-saccharin synergism.
 AU Hyvonen L.
 SO Journal of Food Science, 1978, 43 (1), 251-4 (5 ref.).
 DT Journal
 CT BEVERAGES; COFFEE; FLAVOUR; FRUCTOSE; IMPROVEMENT; MIXTURES; SACCHARIN;
 SUGAR; SWEETENERS; SWEETNESS; SYNERGISM; TEA; XYLITOL
 DED 1 Oct 1980

L10 ANSWER 28 OF 39 FSTA COPYRIGHT 2007 IFIS on STN

AN 2002:L0488 FSTA
 TI Synergistic combination of sweeteners including D-tagatose.
 IN Andersen, H.; Vigh, M. L.
 PA Arla Foods AMBA; Arla Foods, Viby J, Denmark
 SO United States Patent, (2002)
 PI US 6432464 B1
 PRAI US @@@@-70480 19980105
 DT Patent
 LA English
 AB Use of D-tagatose to improve the flavour impact of potent sweeteners is described. When combined with ≥ 1 potent sweetener, D-tagatose improves sensory properties, such as mouthfeel, flavour and aftertaste.
 CC L (Sugars, Syrups and Starches)
 CT PATENTS; SENSORY PROPERTIES; SUGARS; SWEETENERS; TAGATOSE

L10 ANSWER 29 OF 39 FSTA COPYRIGHT 2007 IFIS on STN
 AN 2000(10):T0904 FSTA
 TI Synergism among ternary mixtures of fourteen sweeteners

AU Schiffman, S. S.; Sattely-Miller, E. A.; Graham, B. G.; Booth, B. J.; Gibes, K. M.
 CS Dep. of Psychiatry, Box 3259, Duke Univ. Med. Cent., Durham, NC 27710, USA. E-mail sss(a)acpub.duke.edu
 SO Chemical Senses, (2000), 25 (2) 131-140, 13 ref.
 ISSN: 0379-864X
 DT Journal
 LA English
 AB The degree of synergism of sweet taste among ternary mixtures of 14 sweeteners (including fructose, glucose, sucrose, rebaudioside-A, stevioside, alitame, acesulfame-K and neohesperidin dihydrochalcone) was investigated using a trained panel. Tested ternary mixtures were limited to those compounds in the mixture which demonstrated synergism when present in binary combinations. All sweeteners within the ternary mixtures were iso-intense with 2% sucrose; each self-mixture was also tested (e.g. 2% sucrose + 2% sucrose + 2% sucrose). The triad with the highest mean sweetness intensity rating was alitame-neohesperidin dihydrochalcone-rebaudioside-A (10.8), representing an increase of 99.4% when compared with the average of the self-mixtures. Although this was greater than the maximum 74% increase for binary mixtures, a greater number of dyadic combinations of sweeteners exhibited synergism than the tested ternary combinations. Most ternary mixtures were, however, synergistic (significantly greater than the average of the 3 self-mixtures) to some degree.
 CC T (Additives, Spices and Condiments)
 CT FLAVOUR; SWEETENERS; SWEETNESS

L10 ANSWER 30 OF 39 FSTA COPYRIGHT 2007 IFIS on STN
 AN 2000(04):T0356 FSTA
 TI Sweetener synergism in food.
 AU Kilcast, D.
 CS Leatherhead Food Res. Ass., Leatherhead, UK. Tel. +44 1372 376 761. Fax +44 1372 386 228. E-mail dkilcast(a)ifra.co.uk
 SO Food Ingredients and Analysis International, (1999), May/June, 27-28, 30-33
 ISSN: 0968-574X
 DT Journal
 LA English
 CC T (Additives, Spices and Condiments)
 CT SWEETENERS; FOODS; TITLE

L10 ANSWER 31 OF 39 FSTA COPYRIGHT 2007 IFIS on STN
 AN 1998(10):T0704 FSTA

TI Sweeteners - synergistic solutions.
 AU O'Carroll, P.
 SO World of Ingredients, (1998), March/April, 20-23
 ISSN: 1380-491X
 DT Journal
 LA English
 AB Trends towards use of sweetener blends is discussed with reference to: characteristics and properties of sweeteners; reasons for producing blends; different grades (powder, granules, micronize and encapsulated varieties, sweetener concepts, products produced by Scanchem); NutraSweet; EU maximum use levels of sweeteners; the Sunett®-Multi-Sweetener-Concept (a sweetening system with added health benefits); neohesperidine DC; and sensory data.
 CC T (Additives, Spices and Condiments)
 CT SWEETENERS
 TN NutraSweet; Scanchem; Sunett-Multi-Sweetener-Concept

L10 ANSWER 32 OF 39 FSTA COPYRIGHT 2007 IFIS on STN
 AN 1998(10):L0515 FSTA
 TI Descriptive profiles of synergistic mixtures of bulk and intense sweeteners.
 AU Portmann, M. O.; Kilcast, D.
 CS Correspondence (Reprint) address, D. Kilcast, Leatherhead Food RA, Randalls Rd., Leatherhead KT22 7RY, UK
 SO Food Quality and Preference, (1998), 9 (4) 221-229, 18 ref.
 DT Journal
 LA English
 AB Previous studies have confirmed that blends of sucrose with intense sweeteners, and also maltitol with intense sweeteners (maltitol-cyclamate, maltitol-acesulfame-K and sucrose-cyclamate) have positive synergy (i.e. enhanced sweetness). In the present study, sensory descriptive profiles of solutions of the single bulk and intense sweeteners and their combinations were established. A 10% sucrose solution was used as a reference. Results were evaluated by analysis of variance and principal component analysis to examine overall relationships among single solutions and mixtures of the ingredients. Results showed that mixing acesulfame-K and cyclamate with sucrose and maltitol masked the nonsweet tastes of these intense sweeteners, resulting in improvement of their sensory profile. Maltitol was more efficient than sucrose in reducing the nonsweet taste. It is concluded that such an improvement in taste properties will facilitate better use of these ingredients in a wider range of food and beverage applications.
 CC L (Sugars, Syrups and Starches)
 CT ACESULFAME K; CYCLAMATES; POLYOLS; SENSORY PROPERTIES; SUCROSE; MALTITOL

L10 ANSWER 33 OF 39 FSTA COPYRIGHT 2007 IFIS on STN
 AN 1998(10):H2020 FSTA
 TI Measurement of synergistic effects of binary sweetener mixtures.
 AU Hai-Jung Chung
 CS Dep. of Food & Nutr., Dae-Jin Univ., Kyunggi-do 487-800, Korea
 SO Journal of Food Science and Nutrition, (1997), 2 (4) 291-295, 19 ref.
 ISSN: 1226-332X
 DT Journal
 LA English
 AB Some sensory properties of synthetic sweeteners limit their use in low calorie foods or non-alcoholic beverages. By combining synthetic sweeteners (neohesperidin dihydrochalcone (NHDC) and stevioside) with sucrose, sorbitol or xylitol, these limitations can be overcome. In this study, a trained taste panel and magnitude estimation methods were used to investigate sweetness intensity in binary sweetener mixtures. Synergistic effects (range 28-69%) on sweetness intensity were noted at all concentration in xylitol-stevioside or NHDC-stevioside mixtures.

Synergistic effects (range 11-22%) on sweetness intensity were found only at high concentration in mixtures of sucrose-NHDC, sucrose-stevioside and sorbitol-stevioside. Ginseng tea and orange flavoured beverages, sweetened either with xylitol-stevioside or NHDC-stevioside were prepared and sensory properties were compared with those of sucrose containing beverages. Sensory properties were found to be very similar for all formulations. Results suggest the possibility of using these sweetener mixtures as sugar substitutes in ginseng tea and orange drinks.

CC H (Alcoholic and Non-Alcoholic Beverages)

CT FLAVOUR; GINSENG; SOFT DRINKS; SWEETENERS; SWEETNESS

L10 ANSWER 34 OF 39 FSTA COPYRIGHT 2007 IFIS on STN

AN 1998(03):T0201 FSTA

TI Synergistic sweeteners.

AU Wiedmann, M.; Jager, M.

CS Nutrinova GmbH, Germany

SO Food Ingredients and Analysis International, (1997), 19 (Nov./Dec.) 51-52, 55-56

ISSN: 0968-574X

DT Journal

LA English

AB The development of a new sweetening system that combines prebiotic soluble fibre from the oligosaccharides group with high intensity sweeteners like Sunett and aspartame is described. A performance profile of the sweetening system, which is developed by Nutrinova GmbH, is presented, together with the results of initial sensory tests. It is concluded that the Sunett Multi-Sweetener Concept has excellent potential for the sweetening of sugar-free or reduced-calorie foods. In addition to offering improved sugar-like taste, the sweetening system provides an easy and technically feasible way of integrating nutritionally valuable oligosaccharides into a variety of foods.

CC T (Additives, Spices and Condiments)

CT FIBRE; SWEETENERS; DIETARY FIBRE

TN Nutrinova; Sunett

L10 ANSWER 35 OF 39 FSTA COPYRIGHT 2007 IFIS on STN

AN 1992(06):K0009 FSTA

TI Encapsulated synergistic sweetening agent compositions comprising aspartame and acesulfame-K and methods for preparing same.

IN Cherukuri, S. R.; Faust, S. M.

PA Warner-Lambert Co.; Warner-Lambert, Morris Plains, NJ, USA

SO United States Patent, (1991)

PI US 5064658

PRAI US @@@@-606230 19901031

DT Patent

LA English

AB This invention pertains to sweetened chewing gum compositions which comprise: a gum base; a bulking agent; a flavouring agent; and an encapsulated synergistic sweetening agent composition which comprises a synergistic combination of N-L- α -aspartyl-L-phenylalanine 1-methyl ester and the potassium salt of 6-methyl-1,2,3-oxathiazin-4(3H)-one-2,2-dioxide (present in an amount from about 0.01 to about 50%, by weight of the encapsulated sweetening agent) and an emulsifier (present in amount from about 0.5 to about 20%, by weight of the encapsulated sweetening agent); the following emulsifiers may be used: lecithin; ester of stearates; esters of palmitates; esters of oleates; esters of glycerides; sucrose polyesters; polyglycerol esters; and mixtures of these, and polyvinyl acetate, having a mol. weight from about 2000 to about 14 000 (present in an amount from about 40 to about 93%, by weight of the encapsulated sweetening agent); wherein N-L- α -aspartyl-L-phenylalanine 1-methyl ester is present in an amount from about 0.065 to about 0.095%, by weight of the chewing gum composition. This invention also pertains to methods for preparing the encapsulated synergistic sweetening agent compositions and the chewing gum

compositions in which they may be used.

CC K (Cocoa and Chocolate and Sugar Confectionery Products)

CT ADDITIVES; CHEWING GUMS; PATENTS; SUGAR CONFECTIONERY; SWEETENERS
; UNITED STATES OF AMERICA

L10 ANSWER 36 OF 39 FSTA COPYRIGHT 2007 IFIS on STN

AN 1992(04):T0062 FSTA

TI Synergistic sweetening compositions containing polydextrose and
a chlorodeoxysugar and methods for preparing same.

IN Wong, L. J.; Faust, S. M.; Cherukuri, S. R.

PA Warner-Lambert Co.; Warner-Lambert, Morris Plains, NJ, USA

SO United States Patent, (1991)

PI US 5059428

PRAI US @@@@-491898 19900312

DT Patent

LA English

AB A method for preparing a synergistic sweetening composition comprising
polydextrose and a chlorodeoxysugar derivative is described. The edible
product may be used in chewing gum compositions, hard and soft
confectionery, and beverages. [From En summ.]

CC T (Additives, Spices and Condiments)

CT ADDITIVES; PATENTS; SWEETENERS; UNITED STATES OF AMERICA

L10 ANSWER 37 OF 39 FSTA COPYRIGHT 2007 IFIS on STN

AN 1989(05):V0163 FSTA

TI Synergistic sweetening composition.

IN Batterman, C. K.; Lambert, J. F.

PA Staley Continental Inc.; Staley Continental, Rolling Meadows, IL 60008,
USA

SO PCT International Patent Application, (1988)

PI WO 8808674 A1

PRAI US @@@@-49644 19870511

DT Patent

LA English

AB A sweetener comprises a mixture of a carbohydrate component
comprised predominantly of fructose and a dipeptide sweetener
component. It exhibits significantly higher levels of synergism than
comparable sweeteners based on sucrose and a dipeptide
sweetener. Food, especially beverages, incorporating the
sweetener are described. [From En summ.]

CC V (Patents)

CT ADDITIVES; BEVERAGES; PATENTS; SWEETENERS; PATENT; SYNERGISTIC

L10 ANSWER 38 OF 39 FSTA COPYRIGHT 2007 IFIS on STN

AN 1986(06):T0071 FSTA

TI Synergistic sweetening compositions.

IN Stephens, C. R., Jr.; Torres, A.

PA Pfizer Inc.

SO United States Patent, (1985)

PI US 4536396

DT Patent

LA English

AB Combination of 6-methyl-1,2,3-oxathiazin-4(3H)-one-2,2-dioxide
(acesulfame) with 3-(L -aspartyl-D -alaninamido)-2,2,4,4-
tetramethylthietane masks the bitter taste of oxathiazine and provides
synergistic sweetness over a range of concentration Applications include
incorporation in chewing gums and a range of food and beverages e.g.
desserts or puddings, carbonated or non carbonated fruit flavoured drinks,
beverage dry mixes; canned preserved fruit or fruit juice, baked products
or table sweeteners. [From En summ.]

CC T (Additives, Spices and Condiments)

CT BEVERAGES; CHEWING GUMS; PATENTS; SWEETENERS; FOODS; PATENT;
SYNERGISTIC

L10 ANSWER 39 OF 39 FSTA COPYRIGHT 2007 IFIS on STN
AN 1978(10):T0371 FSTA
TI Fructose-saccharin and xylitol-saccharin synergism.
AU Hyvoenen, L.; Kurkela, R.; Koivistoinen, P.; Ratilainen, A.
CS Dep. of Food Chem. & Tech., Univ. of Helsinki, 00710, Helsinki 71, Finland
SO Journal of Food Science, (1978), 43 (1) 251-254, 5 ref.
DT Journal
LA English
AB Synergism in fructose-saccharin (FR-SA) and xylitol-saccharin (XY-SA) mixtures whose sweetness in solution corresponded to that of a 5% sucrose solution was measured at 5, 23 and 50°C. Sensory evaluations consisted of a magnitude estimation, a paired comparison and a triangle test. Synergism between FR and SA, and XY and SA, was found to be greatest when the sweeteners were almost equal in the mixture in relation to their sweetness at the prevailing temperature. Mixtures of SA and FR or XY without the aftertaste typical of SA were prepared. The sweetness of FR-SA and XY-SA mixtures in coffee was enhanced compared with that in the corresponding water solutions. It is concluded that coffee, tea and juices can be prepared to conventional taste and sweetness standards using these mixtures, but with 40-70% less energy than when sucrose is used as the sweetener.
CC T (Additives, Spices and Condiments)
CT BEVERAGES; FLAVOUR; FRUCTOSE; SACCHARIN; SENSORY ANALYSIS; SWEETENERS; XYLITOL; FRUCTOSE SACCHARIN MIXTURES; MIXTURES; ORGANOLEPTIC EVALUATION; SACCARIN; SWEETNESS; SYNERGISM; XYLITOL SACCARIN MIXTURES